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| 10/075,637      | 02/12/2002  | Kai C. Su            | 20007.0037U1        | 9339             |

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| EXAMINER |
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MARKHAM, WESLEY D

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| ART UNIT | PAPER NUMBER |
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1762

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/075,637             | SU ET AL.           |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Wesley D Markham       | 1762                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) 16,38,43-67 and 69-76 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 68 is/are allowed.
- 6) ☒ Claim(s) 1-15,21,22,25-37,39 and 77 is/are rejected.
- 7) ☒ Claim(s) 17-20,23,24,40-42,78 and 79 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2 total</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Acknowledgement is made of the preliminary amendment filed by the applicant in which Claims 1, 2, 4, 5, 7 – 9, 12 – 18, 21, 22, 25 – 27, 29, 30, 33, 35, 38 – 40, 43, 51 – 53, 55 – 57, 60 – 62, 65 – 70, and 73 were amended. Claims 1 – 79 are pending in U.S. Application Serial No. 10/075,637.

### ***Election/Restrictions***

2. Applicant's election of Group I, drawn to a method of applying a coating, in the reply filed on 7/26/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The claims of Group II (i.e., Claims 43 – 54 and 73 – 76) are withdrawn from further consideration by the examiner as being drawn to a non-elected invention. Additionally, Claims 16, 38, 55 – 67, and 69 – 72 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected species, there being no allowable generic or linking claim from which claims of the non-elected species depend (or contain all the limitations of). Election was made in the reply filed on 7/26/2004.

***Information Disclosure Statement***

3. The IDSs (2) filed on 7/25/2002 and 6/9/2003 are acknowledged, and the references listed thereon have been considered by the examiner as indicated on the attached copies of the PTO-1449 forms.

***Drawings***

4. The formal drawings (7 sheets) filed on 2/12/2002 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "804" and "830" (see page 24 of the specification). Additionally, the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference signs not mentioned in the description: "836" in Figure 8; "914" and "915" in Figure 9; "310", "318", and "320" in Figure 3C; and "S" in Figure 14A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office Action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office Action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The lengthy specification (30 pages, exclusive of the claims) has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
6. The abstract of the disclosure is objected to because it contains the following typographical errors: The phrase, "from the cliché to deformable body of a transfer pad" in lines 4 – 5 is missing an "a" before the word "deformable". The phrase, "an optical lens during casting process" in lines 14 – 15 is missing an "a" before the word "casting". Correction is required. See MPEP § 608.01(b).
7. The disclosure is objected to because of the following informalities: On page 27, line 8, and page 29, lines 8 and 18, of the specification, the word, "for" is misspelled "fro". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. Claims 25, 31, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. **Claim 25** recites the limitations "the film" in step (i) of the claim and "the plurality of holes" in step (ii) of the claim. There is insufficient antecedent basis for these limitations in the claim. Specifically, Claim 25 depends from Claim 22, which depends from Claim 21. However, neither Claim 21 nor Claim 22 recites or implies that the screen comprises "a film" or "a plurality of holes". Therefore, it is unclear what the limitations "the film" in step (i) of Claim 25 and "the plurality of holes" in step (ii) of Claim 25 refer to, and the scope of the claim is vague and indefinite. For the purposes of examination, the examiner has interpreted Claim 25 to depend from Claim 23, which does refer to a film having a plurality of holes.
11. **Claim 31** (from which **Claim 32** depends) refers to "the cliché plate" throughout the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, Claim 31 depends from Claim 26. However, Claim 26 does not recite or imply that "a cliché plate" is used in the method for applying a coating. Therefore, it is unclear what "the cliché plate" in Claim 31 refers to, and the scope of the claim is vague and indefinite. For the purposes of examination, the examiner has interpreted Claim 31 to depend from Claim 27, which does refer to a cliché plate.

### ***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ram et al. (WO 97/41180 A1).
14. Regarding **Claims 1, 26, and 27**, Ram et al. teaches a method of applying a coating to an optical device, the method comprising placing a coating solution in a cliché of a cliché plate, transferring the coating solution from the cliché to a transfer pad that has a deformable body (e.g., made of silicone rubber) retaining the coating solution, and pressing the transfer pad to the optical device so as to transfer the coating solution from the body of the transfer pad to the optical device, wherein the optical device is a selected one of a spectacle lens or a mold for forming a spectacle lens (Abstract, pages 1 – 4, page 8, lines 15 – 30, and page 9, lines 24 – 27). The coating is abrasion resistant so that the imprinted articles (e.g., lenses) can be safely packaged and shipped (page 3, lines 21 – 30) (i.e., the coating solution imparts scratch-resistant properties to the optical device, as claimed by the applicant).

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
17. Claims 3, 4, 6 – 8, 28, 29, and 31 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram et al. in view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012).
18. Ram et al. teaches all the limitations of **Claims 3, 4, 28, and 29** as set forth above in paragraph 14, except for the specifics of the coating solution reservoir and the cliché plate structure and operation (e.g., filling the cliché of the cliché plate with coating solution from the reservoir, the reservoir having a body with first and second ends, a longitudinal axis, and defining an axially extending bore, a cap closing the bore at the first end, and a wiper blade surrounding the bore at the second end, the filling step comprising “positioning the reservoir...” and “moving the cliché plate relative to the reservoir...”). Additionally, Ram et al. teaches all the limitations of **Claims 6 – 8 and 31 – 33** as set forth above in paragraph 14, except for the



specifics (i.e., the relative movements of the transfer pad, cliché plate, and optical device) of the transferring and pressing steps recited in the claims. However, the particular operation and structure of the cliché plate (i.e., how it is filled with the coating solution, the relative movements of the pad, plate, and optical device, etc.) does not appear to be particularly limited in the process of Ram et al. Dietz et al. teaches a suitable cliché plate / coating solution reservoir that can be utilized in pad printing devices and processes (i.e., processes analogous to that of Ram et al.). The cliché plate / coating solution reservoir of Dietz et al. and its operation meet the limitations of Claims 3, 4, 28, and 29 (see abstract, figures 2, 4, and 6, col.1, col.2, lines 42-65, col.4, and col.5, lines 40-67 of Dietz et al.). It would have been obvious to one of ordinary skill in the art to utilize the cliché plate / coating reservoir structure and filling system and method of Dietz et al. in the process of Ram et al. because Ram et al. is silent regarding the specific operation of the cliché plate system (i.e., its interior structure, how it is filled, etc.), and Dietz et al. teaches a suitable method and apparatus for inking (i.e., filling the cliché of) a cliché plate, as desired by Ram et al. Additionally, Ram et al. is silent regarding the aforementioned relative movements of the transfer pad, cliché plate, and optical device during the “transferring” and “pressing” steps, but the process of Ram et al. does not appear to be particularly limited so long as the desired printed pattern is formed on the spectacle lenses. Magdassi teaches a similar process of pad-printing patterns on lenses and teaches the specifics (i.e., the relative movements of the transfer pad, cliché plate, and optical device) of the transferring and pressing steps recited in

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Claims 6 – 8 and 31 – 33 (abstract, figures 1-3, col.2, lines 63-68, col.3, lines 1-11, col.4, lines 32-52, col.5, lines 47-68, and col.6 of Magdassi). It would have been obvious to one of ordinary skill in the art to perform the pad printing process of Ram et al. by using the specific process taught by Magdassi (i.e., the relative movements of the transfer pad, cliché plate, and optical device during the transferring and pressing steps, as claimed by the applicant) with the reasonable expectation of successfully and advantageously producing a pad printed lens using a well-known series of process steps / relative movements of the pad printing apparatus, as taught by Magdassi.

19. Claims 5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram et al. in view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Phlipp (USPN 4,557,195).
20. The combination of Ram et al., Magdassi et al., and Dietz et al. teaches all the limitations of **Claims 5 and 30** as set forth above in paragraph 18, except that the reservoir has an inlet through the cap through which coating solution is supplied into the bore of the reservoir. Specifically, the aforementioned combination of references is silent as to how the coating solution reservoir is filled. Phlipp teaches that it was known in the art at the time of the applicant's invention to fill the reservoir of a pad printing machine by supplying the solution through the inlet of the reservoir (abstract, figures 8 and 10, col.1, col.5, lines 65-68, col.6, lines 1-6, col.9, lines 10-17, and col.13, lines 54-63). It would have been obvious to one of ordinary skill in

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the art to fill the reservoir of the combination of Ram et al., Magdassi et al., and Dietz et al. in the manner taught by Phlipp (and claimed by the applicant), specifically through cap "28" (see col.4, lines 59-61 of Dietz et al.), with the reasonable expectation of successfully and advantageously using a known method of supplying coating solution to a pad-printing reservoir, thereby allowing the system to properly function in the manner desired by the purveyor in the art (i.e., to contain the desired amount of coating solution required to successfully perform a pad-printing operation).

21. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram et al. in view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Tarumi et al. (USPN 4,329,378).
22. The combination of Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claims 12 and 13** as set forth above in paragraphs 14 and 18, except for a method wherein the coating solution is applied to substantially the entire optical surface (i.e., lens). Please note that Ram et al. does teach that the coating is dried (i.e., cured) to form a coating on the lens (page 9, lines 24 – 27), as required by Claim 13. Specifically, the coating solution of Ram et al. is pad printed into a desired pattern on the lens (abstract), not on substantially the entire lens surface. However, Tarumi et al. teaches that, in the art of pad printing plastic eyeglass lenses for subsequent identification (i.e., a process analogous to that of Ram et al.), the lens can be marked in whole or in part (abstract, col.1, lines 29-46, and example 4).

Therefore, it would have been obvious to one of ordinary skill in the art to utilize the pad printing process of the combination of Ram et al., Magdassi, and Dietz et al. to print a coating on substantially the entire lens surface (i.e., to mark the lens in whole, as taught by Tarumi et al.) because Tarumi et al. teaches that the goal of Ram et al. (i.e., obtaining a lens that can be subsequently identified due to a pad printed coating) can be achieved by either marking the lens in whole (as claimed by the applicant) or in part (as taught by Ram et al.).

23. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ram et al. in view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Sanyo (JP 07-245499 A).
24. The combination of Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claims 21 and 22** as set forth above in paragraphs 14 and 18, except for a method that further comprises placing a screen over the optical surface, applying the coating solution to the screen (e.g., by pressing the transfer pad against the screen), and pressing the transfer pad against the screen and to the optical surface to transfer the coating solution from the transfer pad / screen to the optical surface. However, an overall goal of Ram et al. is to transfer pad print a desired pattern onto the surface of an optical device (e.g., a spectacle lens) for identification (abstract). Sanyo teaches that a transfer pad printing process can be carried out by pressing the pad onto a screen mask so as to transfer a pattern from the mask to a substrate (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to

perform the process of the combination of Ram et al., Magdassi, and Dietz et al. while placing a screen having a desired pattern over the lens (i.e., pressing the transfer pad against the screen to transfer the coating solution from the pad, to and through the screen, and to the underlying lens) with the reasonable expectation of successfully and advantageously insuring that the desired pattern is accurately transferred from the transfer pad to the spectacle lens due to the patterned screen interposed between the pad and the lens.

25. Claims 1, 3, 4, 6 – 9, 26 – 29, and 31 – 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012).
26. Regarding **Claims 1, 3, 4, 6 – 8, 26 – 29, and 31 – 33**, Doshi teaches a method for applying a coating to an optical device, specifically a “lens”, the method comprising transfer pad printing a desired pattern on the surface of the lens (or on the surface of a mold used to make the lens) in order to mark or tint the lens (abstract, figures 5-7, col.3, lines 45-54, col.8, lines 43-56, col.10, lines 5-11, col.12, lines 13-33 and 61-67, col.13, lines 1-3 and 48-67, col.14, lines 23-65, col.18, lines 3-12 and 31-51, col.19, lines 62-67, col.24, lines 20-31, col.26, lines 56-67, and col.27, lines 1-7). Doshi does not explicitly teach that the lens is a spectacle lens, as required by independent Claims 1 and 26. However, Doshi broadly defines the “lens” in the context of the invention as being “a composition of matter that can transmit light” (col.8, lines 66 – 67). Further, Ram et al. teaches that it was known in the art at the

time of the applicant's invention to pad print a desired pattern onto the surface of a spectacle lens for subsequent identification (Abstract, pages 1 – 4, page 8, lines 15 – 30, and page 9, lines 24 – 27). Therefore, it would have been obvious to one of ordinary skill in the art to perform the pad printing process of Doshi to mark a spectacle lens, as taught by Ram et al., with the reasonable expectation of (1) success, as a "lens" is very broadly defined by Doshi so as to include a spectacle lens, and (2) obtaining the benefits of the process of Doshi, e.g., printing desired images on or within the lens for aesthetic or identification purposes, as such benefits pertain to any kind of lenses, including contact lenses (as explicitly taught by Doshi) and spectacle lenses (as taught by Ram et al.). Further, Doshi does not explicitly teach the specifics of the pad printing process (e.g., placing a coating solution in a cliché of a cliché plate, transferring the coating solution to a deformable transfer pad, and pressing the transfer pad to the optical device surface to transfer the coating solution from the deformable body of the pad to the device, as required by Claims 1, 26, and 27. However, Doshi does teach using a pad printing process in general (col.8, lines 43-56, col.13, lines 65-66, col.14, lines 23-29), including pad printing processes that are known in the art (col.14, lines 23-29). This teaching would motivate one of ordinary skill in the art to seek-out and utilize a pad printing process that is known in the art in order to carry-out the process of Doshi. Ram et al. (pages 1 – 4, page 8, lines 15 – 30, and page 9, lines 24 – 27), Magdassi (abstract, figures 1-3, col.2, lines 63-68, col.3, lines 1-11, col.4, lines 32-52, col.5, lines 47-68, and col.6), and Dietz et al. (abstract, figures 2- 4 and 6, col.1, col.2,

lines 42-65, col.4, and col.5, lines 40-67) teach the specifics of the pad printing process claimed by the applicant (e.g., placing a coating solution in a cliché of a cliché plate, transferring the coating solution to a deformable transfer pad, and pressing the transfer pad to the optical device surface to transfer the coating solution from the deformable body of the pad to the device). It would have been obvious to one of ordinary skill in the art to utilize the aforementioned well-known series of process steps to carry-out the pad printing process of Doshi with the reasonable expectation of successfully and advantageously using a pad printing process known in the art, which is explicitly desired by Doshi, to achieve the goal of Doshi (i.e., printing an image on the lens). Further, Doshi does not explicitly teach that the coating solution, "imparts scratch-resistant properties to the optical device", as required by independent Claims 1 and 26. However, the inks (i.e., coating solution) taught by Doshi comprise various monomeric and/or polymeric materials (see cols.11 – 12) and are polymerized onto the lens surface (col.14, lines 50-57). It is the examiner's position that the polymerized ink coatings of Doshi would have inherently imparted some "scratch-resistant properties" to the lens (e.g., because a lens with a coating would be at least marginally more "scratch-resistant" than a lens without the coating due to the presence of the coating). Further, the combination of Doshi and Ram et al. teaches all the limitations of Claims 3, 4, 28, and 29 as set forth above, except for the specifics of the coating solution reservoir and the cliché plate structure and operation (e.g., filling the cliché of the cliché plate with coating solution from the reservoir, the reservoir having a body with first and second ends, a

longitudinal axis, and defining an axially extending bore, a cap closing the bore at the first end, and a wiper blade surrounding the bore at the second end, the filling step comprising "positioning the reservoir..." and "moving the cliché plate relative to the reservoir..."). Additionally, the combination of Doshi and Ram et al. teaches all the limitations of Claims 6 – 8 and 31 – 33 as set forth above, except for the specifics (i.e., the relative movements of the transfer pad, cliché plate, and optical device) of the transferring and pressing steps recited in the claims. However, the particular operation and structure of the cliché plate (i.e., how it is filled with the coating solution, the relative movements of the pad, plate, and optical device, etc.) does not appear to be particularly limited in the process of Doshi. Dietz et al. teaches a suitable cliché plate / coating solution reservoir that can be utilized in pad printing devices and processes (i.e., processes analogous to that of Doshi). The cliché plate / coating solution reservoir of Dietz et al. and its operation meet the limitations of Claims 3, 4, 28, and 29 (see abstract, figures 2, 4, and 6, col.1, col.2, lines 42-65, col.4, and col.5, lines 40-67 of Dietz et al.). It would have been obvious to one of ordinary skill in the art to utilize the cliché plate / coating reservoir structure and filling system and method of Dietz et al. in the process of the combination of Doshi and Ram et al. because Doshi is silent regarding the specific operation of the cliché plate system (i.e., its interior structure, how it is filled, etc.), and Dietz et al. teaches a suitable method and apparatus for inking (i.e., filling the cliché of) a cliché plate, as desired by Doshi. Additionally, Doshi is silent regarding the aforementioned relative movements of the transfer pad, cliché plate, and optical



device during the “transferring” and “pressing” steps, but the process of Doshi does not appear to be particularly limited so long as the desired printed pattern is formed on the lenses. Magdassi teaches a similar process of pad-printing patterns on lenses and teaches the specifics (i.e., the relative movements of the transfer pad, cliché plate, and optical device) of the transferring and pressing steps recited in Claims 6 – 8 and 31 – 33 (abstract, figures 1-3, col.2, lines 63-68, col.3, lines 1-11, col.4, lines 32-52, col.5, lines 47-68, and col.6 of Magdassi). It would have been obvious to one of ordinary skill in the art to perform the pad printing process of the combination of Doshi and Ram et al. by using the specific process taught by Magdassi (i.e., the relative movements of the transfer pad, cliché plate, and optical device during the transferring and pressing steps, as claimed by the applicant) with the reasonable expectation of successfully and advantageously producing a pad printed lens using a well-known series of process steps / relative movements of the pad printing apparatus, as taught by Magdassi. Regarding **Claims 9 and 34**, Doshi does not explicitly teach moving the optical device (i.e., lens) to a third position for irradiating. However, Doshi does teach polymerizing the coating (col.14, lines 50-57) with UV irradiation or thermally (col.13, lines 1-3), but is silent regarding where the irradiation occurs. Magdassi teaches that it was known in the art to transfer a pad printed lens to another location (e.g., an oven) for curing (col.6, lines 1-13). Therefore, it would have been obvious to one of ordinary skill in the art to move the pad printed lens of the combination of Doshi, Ram et al., Dietz et al., and Magdassi to a position for irradiating (e.g., with heat or UV) with the reasonable expectation of

successfully curing / polymerizing the coating in a manner consistent with that which is known in the art.

27. Claims 2, 10, 11, and 35 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Blum (USPN 5,219,497).
28. The combination of Doshi, Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claims 2, 10, 11, and 35 – 37** as set forth above in paragraph 26, except for a method wherein the coating layer is formed / cured with the application of microwave energy (e.g., generated by a microwave source / oven) as well as with another form of energy such as UV or IR (i.e., energy having a wavelength outside the wavelength range of microwaves). Specifically, Doshi teaches heat or UV polymerizing (col.12, lines 61-67, col.13, lines 1-3, and col.26, lines 56-67). However, Blum teaches that a combination of energy such as heat generated by microwaves, IR, visible light, etc. and UV light can speed up the process of curing coatings on lenses as well as achieving a more even cure (abstract, col.5, lines 3-9, col.9, lines 22-45, col.10, lines 34-45 and 58-59, col.12, lines 13-26, and col.18, lines 19-47). Therefore, it would have been obvious to one of ordinary skill in the art to utilize a combination of microwave (e.g., from any source / oven), IR, UV, and/or visible light energy to cure the coatings of Doshi with the reasonable expectation of

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successfully and advantageously speeding up the curing process and achieving a more even cure, as taught by Blum.

29. Claims 5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Phlipp (USPN 4,557,195).

30. The combination of Doshi, Ram et al., Magdassi et al., and Dietz et al. teaches all the limitations of **Claims 5 and 30** as set forth above in paragraph 26, except that the reservoir has an inlet through the cap through which coating solution is supplied into the bore of the reservoir. Specifically, the aforementioned combination of references is silent as to how the coating solution reservoir is filled. Phlipp teaches that it was known in the art at the time of the applicant's invention to fill the reservoir of a pad printing machine by supplying the solution through the inlet of the reservoir (abstract, figures 8 and 10, col.1, col.5, lines 65-68, col.6, lines 1-6, col.9, lines 10-17, and col.13, lines 54-63). It would have been obvious to one of ordinary skill in the art to fill the reservoir of the combination of Doshi, Ram et al., Magdassi et al., and Dietz et al. in the manner taught by Phlipp (and claimed by the applicant), specifically through cap "28" (see col.4, lines 59-61 of Dietz et al.), with the reasonable expectation of successfully and advantageously using a known method of supplying coating solution to a pad-printing reservoir, thereby allowing the system to properly function in the manner desired by the purveyor in the art (i.e., to contain

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the desired amount of coating solution required to successfully perform a pad-printing operation).

31. Claims 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Tarumi et al. (USPN 4,329,378).
32. The combination of Doshi, Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claims 12, 13, and 15** as set forth above in paragraph 26, except for a method wherein the coating solution is applied to substantially the entire optical surface (i.e., lens). Please note that Doshi does teach that the coating is polymerized (i.e., cured) with a UV curing source to form a coating on the lens (col.12, lines 61-67, col.13, lines 1-3, and col.26, lines 56-67), as required by Claims 13 and 15. Additionally, Doshi teaches that the pattern can be printed on the entire lens (col.18, lines 9-10). Tarumi et al. teaches that, in the art of pad printing plastic eyeglass lenses for subsequent identification (i.e., a process analogous to that of Doshi and Ram et al.), the lens can be marked in whole or in part (abstract, col.1, lines 29-46, and example 4). Therefore, it would have been obvious to one of ordinary skill in the art to utilize the pad printing process of the combination of Doshi, Ram et al., Magdassi, and Dietz et al. to print a coating on substantially the entire lens surface (i.e., to mark the lens in whole, as taught by Tarumi et al.) because Tarumi et al. teaches that the subsequent identification of a pad printed

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lens can be achieved by either marking the lens in whole (as claimed by the applicant) or in part. Further, the exact proportion of the lens surface that is pad-printed with the coating solution would be determined by the purveyor in the art based on aesthetic preferences (e.g., the kind and amount of tinting of the lens desired by the user).

33. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Tarumi et al. (USPN 4,329,378), in further view of Blum.
34. The combination of Doshi, Ram et al., Magdassi, Dietz et al., and Tarumi et al. teaches all the limitations of **Claim 14** as set forth above in paragraph 32, except for a method wherein the curing source comprises radiation generated by an IR light source. Specifically, Doshi teaches heat or UV polymerizing (col.12, lines 61-67, col.13, lines 1-3, and col.26, lines 56-67). However, Blum teaches that a combination of energy such as heat generated by microwaves, IR, visible light, etc. and UV light can speed up the process of curing coatings on lenses as well as achieving a more even cure (abstract, col.5, lines 3-9, col.9, lines 22-45, col.10, lines 34-45 and 58-59, col.12, lines 13-26, and col.18, lines 19-47). Therefore, it would have been obvious to one of ordinary skill in the art to utilize a combination of microwave, IR, UV, and/or visible light energy to cure the coatings of Doshi with the

reasonable expectation of successfully and advantageously speeding up the curing process and achieving a more even cure, as taught by Blum.

35. Claims 21, 22, and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Sanyo.
36. The combination of Doshi, Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claims 21, 22, and 77** as set forth above in paragraph 26, except for a method that further comprises placing a screen over the optical surface, applying the coating solution to the screen (e.g., by pressing the transfer pad against the screen), and pressing the transfer pad against the screen and to the optical surface to transfer the coating solution from the transfer pad / screen to the optical surface. However, an overall goal of Doshi is to transfer pad print a desired pattern onto the surface of an optical device (e.g., a lens) (abstract). Sanyo teaches that a transfer pad printing process can be carried out by pressing the pad onto a screen mask so as to transfer a pattern from the mask to a substrate (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to perform the process of the combination of Doshi, Ram et al., Magdassi, and Dietz et al. while placing a screen having a desired pattern over the lens (i.e., pressing the transfer pad against the screen to transfer the coating solution from the pad, to and through the screen, and to the underlying lens) with the reasonable expectation of successfully and advantageously insuring that the desired pattern is accurately transferred from the

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transfer pad to the spectacle lens due to the patterned screen interposed between the pad and the lens.

37. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi (USPN 6,315,410 B1) in view of Ram et al., in further view of Magdassi (USPN 4,946,269) and Dietz et al. (USPN 6,129,012), in further view of Nabitasu KK (JP 63-274515 A).
38. The combination of Doshi, Ram et al., Magdassi, and Dietz et al. teaches all the limitations of **Claim 39** as set forth above in paragraph 26, except for a method wherein the optical device is a mold for forming a spectacle lens, specifically both a front and back mold, each mold having a facing inside surface which is its optical surface (on which the coating is pad printed). However, Doshi does teach that the image can be printed on both sides of the lens (col.18, lines 7-10) and on the surface of a mold used to form the lens (figures 6 and 7). Nabitasu KK teaches that, by pad printing a pattern onto a mold before molding, complicated and fine patterns can be simply produced when the pattern is transferred to the surface of a subsequently molded substrate (abstract). Therefore, it would have been obvious to one of ordinary skill in the art to pad print a desired pattern onto both a front and back mold surface for forming a spectacle lens in the process of the combination of Doshi, Ram et al., Magdassi, and Dietz et al. with the reasonable expectation of successfully and advantageously producing a complicated and fine pattern on both

the front and back surfaces of the lens, as desired by Doshi, due to the simple in-mold printing method.

### ***Double Patenting***

39. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
40. Claims 1, 3, 4, 6 – 9, 12 – 15, 26 – 29, and 31 – 34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 3, 5, 11, and 23 of copending Application No. 10/712,704 (i.e., Su et al., US 2004/0106707 A1) in view of Magdassi and Dietz et



al. Specifically, Claims 1 – 3, 5, 11, and 23 of copending Application No. 10/712,704 teach all the limitations of **Claims 1, 3, 4, 6 – 9, 12 – 15, 26 – 29, and 31 – 34** (i.e., pad printing a protective (i.e., scratch-resistant) coating on the surface of an optical device, specifically an eyeglass lens, and then irradiating the coating with UV, IR, etc. to cure the coating), except for the specifics of the pad printing process (e.g., placing a coating solution in a cliché of a cliché plate, transferring the coating solution to a deformable transfer pad, and pressing the transfer pad to the optical device surface to transfer the coating solution from the deformable body of the pad to the device; filling the cliché of the cliché plate with coating solution from the reservoir, the reservoir having a body with first and second ends, a longitudinal axis, and defining an axially extending bore, a cap closing the bore at the first end, and a wiper blade surrounding the bore at the second end, the filling step comprising “positioning the reservoir...” and “moving the cliché plate relative to the reservoir...”; and the relative movements of the transfer pad, cliché plate, and optical device during the transferring and pressing steps). However, such limitations are conventional in the art of pad printing and would have been obvious to one of ordinary skill in the art in light of the teachings of Magdassi and Dietz et al. for the reasons set forth above (see, for example, paragraph 26).

41. **Claims 2, 10, 11, and 35 – 37** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 3, 5, 11, and 23 of copending Application No. 10/712,704 (i.e., Su et al., US 2004/0106707 A1) in view of Magdassi and Dietz et al., in further view of Blum for

the reasons set forth in paragraph 40 above (which discusses the combination of Su et al., Magdassi, and Dietz et al.) and paragraph 28 above (which discusses why it would have been obvious to one of ordinary skill in the art to utilize a combination of microwave radiation, UV, IR, and/or visible light to cure a coating on a lens (i.e., in order to achieve an increased curing rate and a more even cure, as taught by Blum)).

42. **Claims 5 and 30** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 3, 5, 11, and 23 of copending Application No. 10/712,704 (i.e., Su et al., US 2004/0106707 A1) in view of Magdassi and Dietz et al., in further view of Phlipp et al. for the reasons set forth in paragraph 40 above (which discusses the combination of Su et al., Magdassi, and Dietz et al.) and paragraph 30 above (which discusses why it would have been obvious to one of ordinary skill in the art to provide the coating solution into the reservoir in the manner claimed by the applicant in light of the teachings of Phlipp et al.).
43. These are provisional obviousness-type double patenting rejections.

***Allowable Subject Matter***

44. Claims 17 – 20, 23, 24, 40 – 42, 78, and 79 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 25

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has been rejected under 35 U.S.C. 112, second paragraph, but no art has been applied against the claim. Claim 68 is allowed.

45. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or reasonably suggest the following claim limitations in conjunction with the applicant's claimed transfer pad coating process: (1) the coating solution is applied to substantially the entire surface of the optical device, wherein the surface is the facing inside surfaces of both a front mold and a back mold (Claims 17 – 20); (2) the specific structure of the screen used in the process (Claims 23 – 25, 78, and 79); and (3) the specific combination of irradiating (microwave) and curing (wavelength outside the microwave range) steps in conjunction with the mold coating process (Claims 40 – 42 and 68).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Seiko Epson (JP 10-264494 A, and 10-282459 A) teaches a method of pad printing a mark onto the surface of a spectacle lens. Iori et al. (USPN 6,103,301) teaches a method of pad printing a marking material onto a plastic substrate such as an eyeglass lens. Beaton et al. (USPN 5,837,314) teaches pad printing a surfactant onto the interior surfaces of a mold.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D Markham whose telephone number is (571)

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272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WDM

Wesley D Markham  
Examiner  
Art Unit 1762

  
**MICHAEL CLEVELAND**  
**PRIMARY EXAMINER**